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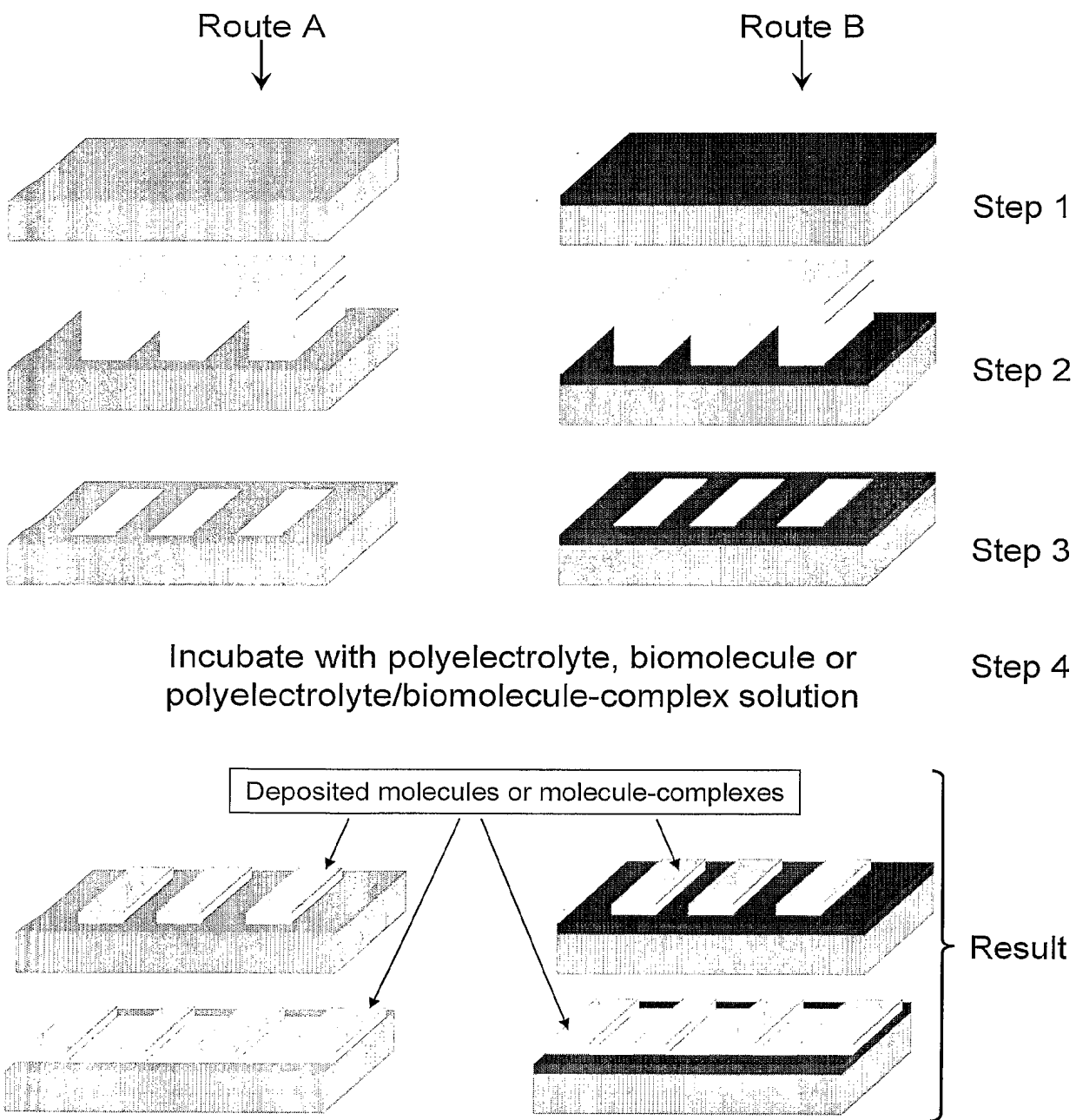
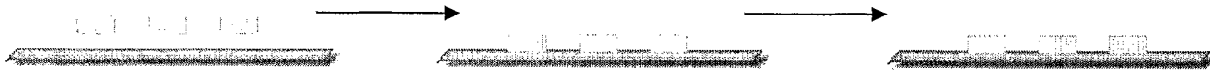
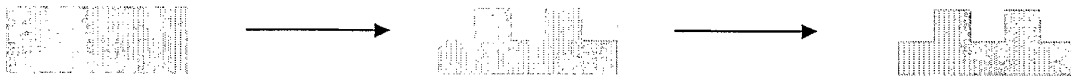
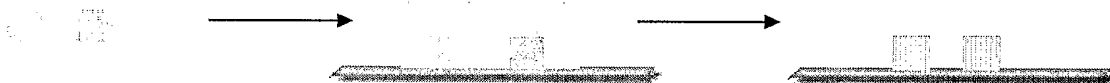


Fig. 1

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A: μ CP – micro Contact Printing

B: REM – Replica Molding

C: μ TM – micro Transfer Molding

D: MIMIC – Micro Molding in Capillaries



E: SAMIM – Solvent Assisted Micro Molding

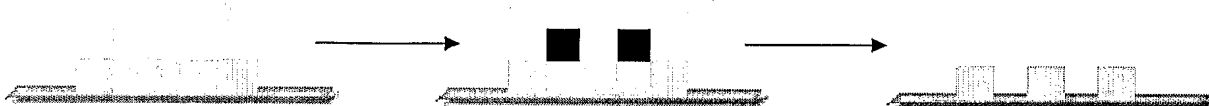


Fig. 2

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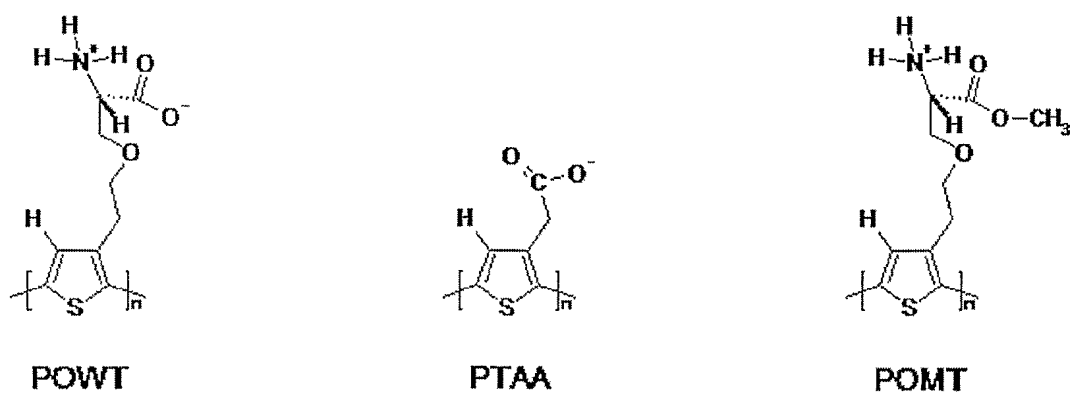


Fig. 3

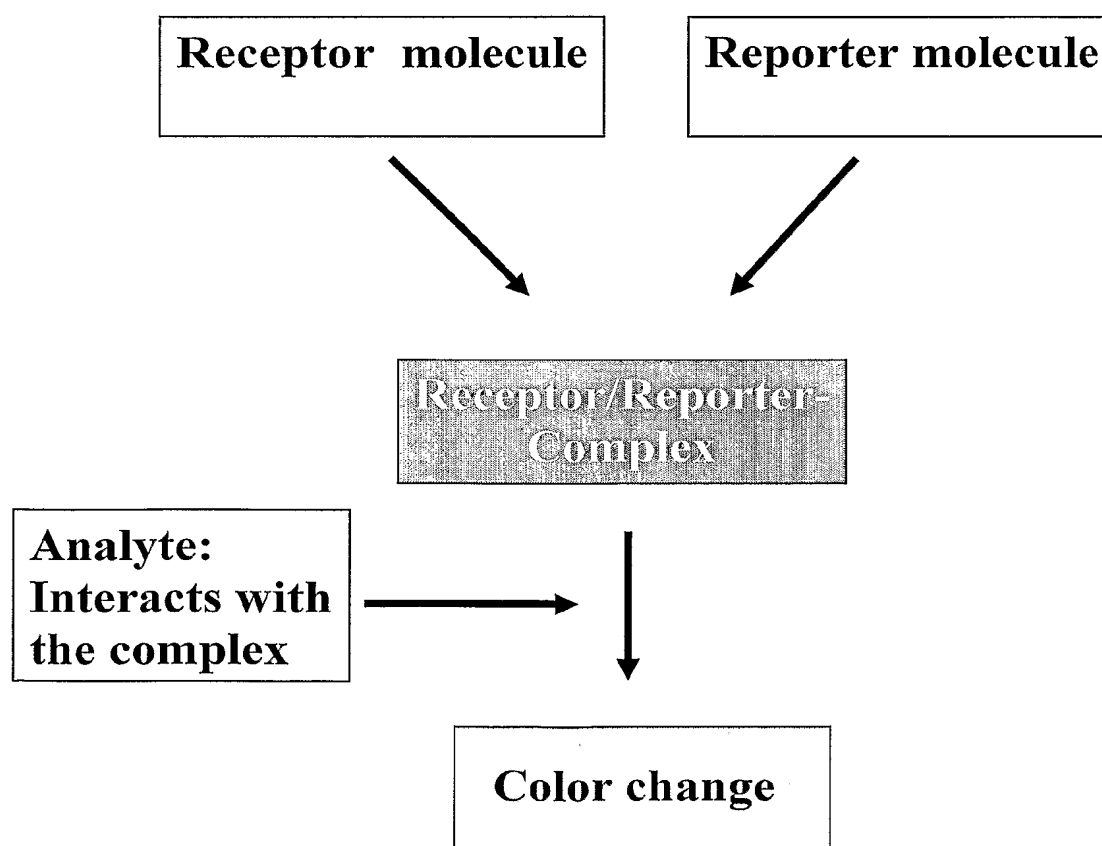
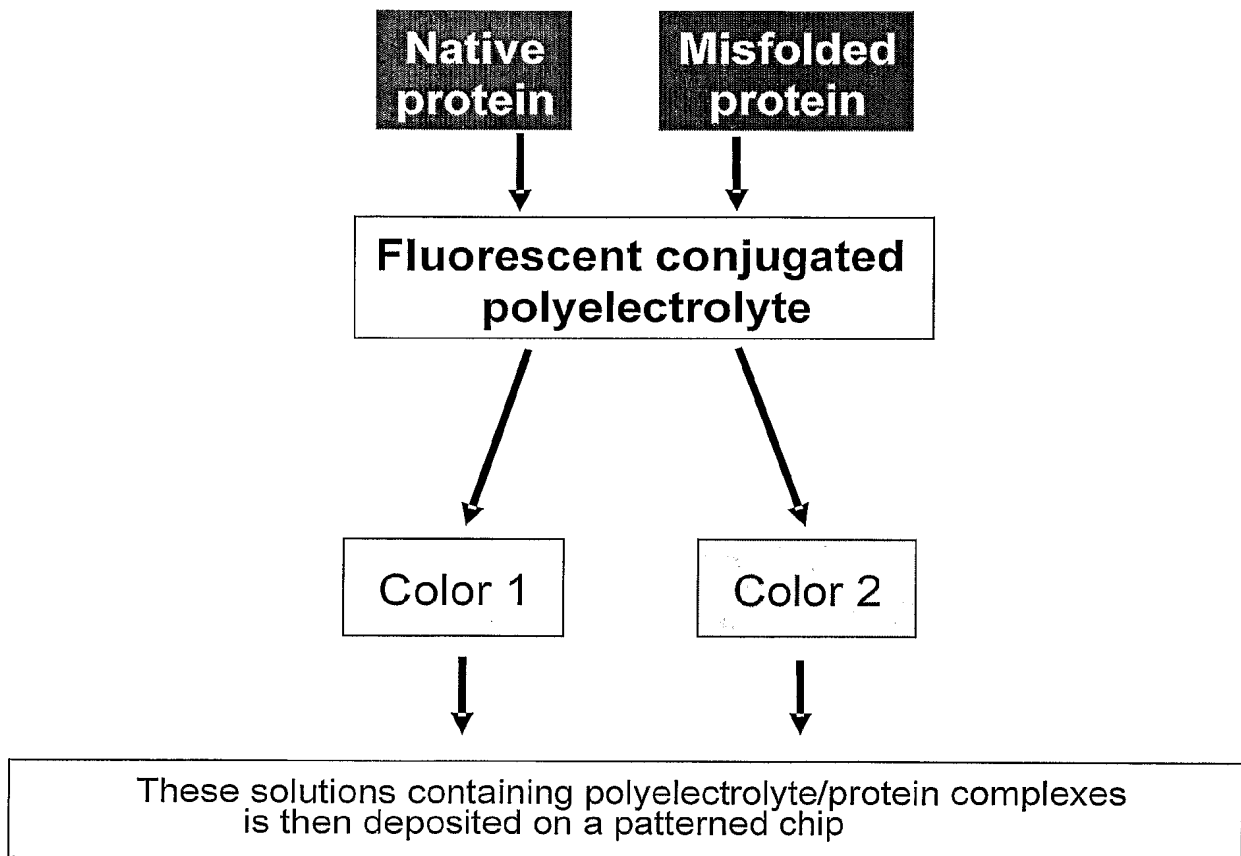
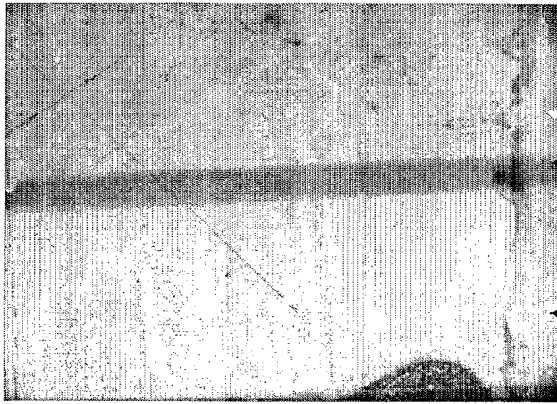


Fig. 4

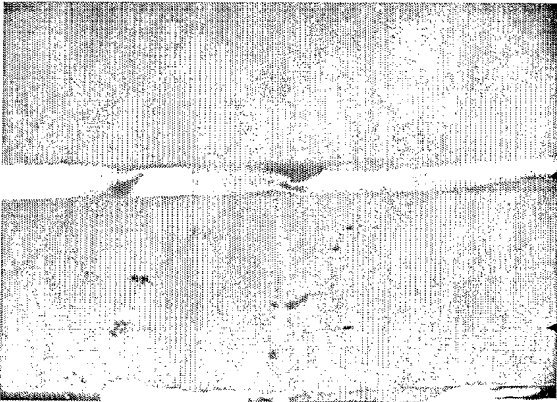
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**Fig. 5**

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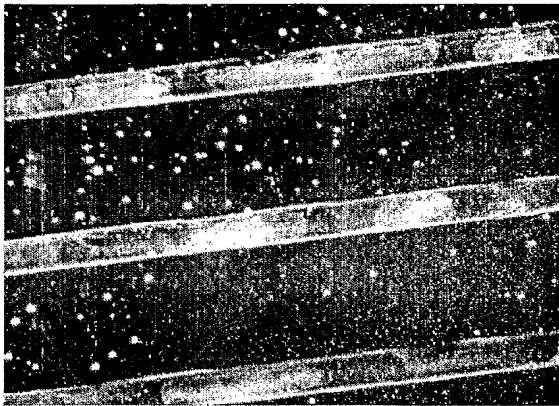
POWT was dissolved in pure water

Hydrophilic area:POWT in pure water solution
does not stain this area**Hydrophobic area:**POWT in water solution stains
this area only

POWT was dissolved in 20% water/80% methanol

Hydrophilic area:POWT in water(20%) / methanol (80%)
solution stains this area in red**Hydrophobic area:**POWT in water(20%) / methanol (80%)
solution stains this area in green**Fig. 6**

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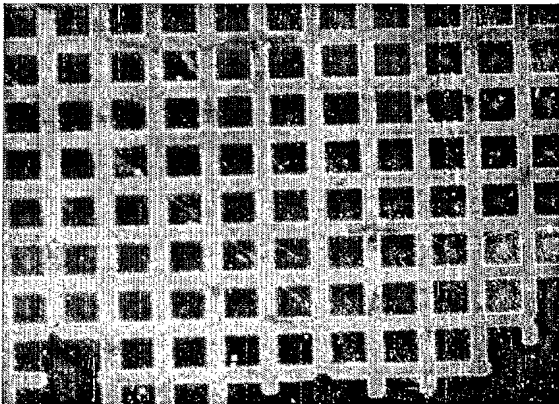
**Hydrophilic area:**

POWT/ssDNA complex in phosphate buffer solution stains this area

Hydrophobic area:

POWT/ssDNA complex in phosphate buffer solution does not stain this area particularly good

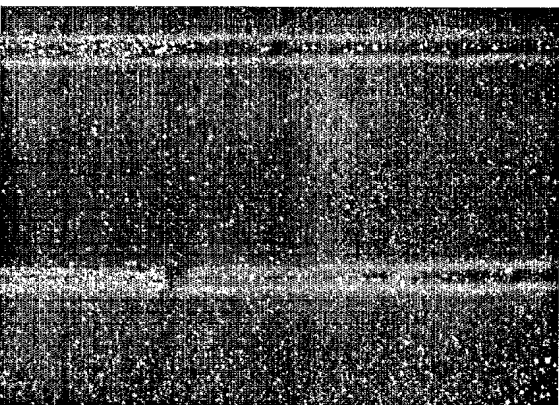
Pattern obtained from POWT/ssDNA-complex dissolved in phosphate buffer.



Same as above but with a different hydrophobic pattern on the hydrophilic substrate.

The squares are hydrophobic and the surrounding area is hydrophilic.

Pattern obtained from POWT/ssDNA-complex dissolved in phosphate buffer.

**Hydrophilic area:**

POWT/dsDNA complex in phosphate buffer solution stains this area

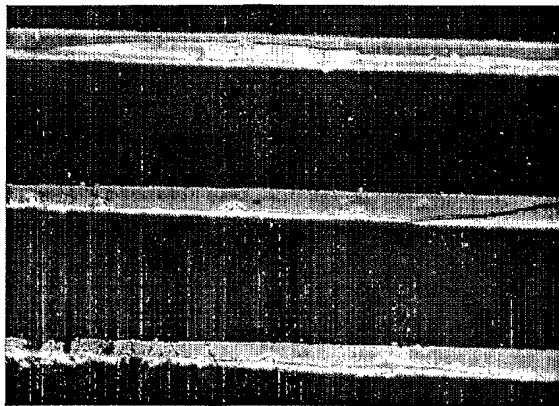
Hydrophobic area:

POWT/dsDNA complex in phosphate buffer solution does not stain this area particularly good

Pattern obtained from POWT/dsDNA-complex dissolved in phosphate buffer.

Fig. 7

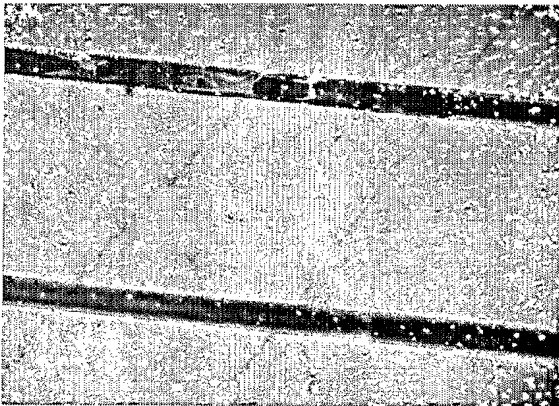
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**Hydrophilic area:**

POWT/poly-Glutamic acid complex in phosphate buffer solution stains this area

**Hydrophobic area:**

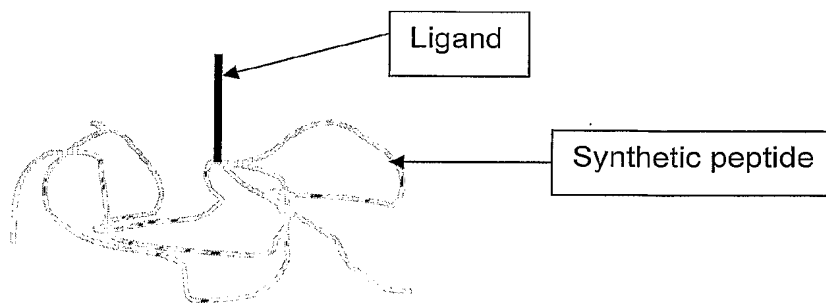
POWT/poly-Glutamic acid complex in phosphate buffer solution does not stain this area

**Hydrophilic area:**

POWT/poly-Lysine complex in phosphate buffer solution stains this area

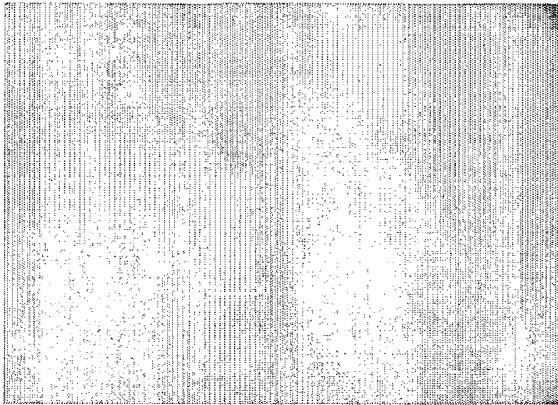
**Hydrophobic area:**

POWT/poly-Lysine complex in phosphate buffer solution does not stain this area

Fig. 8

These two examples of synthetic peptides can be synthesized with ligands that can bind to a biomolecule of choice.

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**Route B:**

POWT in pure water was coated on a clean substrate and then modified with PDMS stamp with a relief structure. The modified areas that the patterned stamp creates cannot be seen before incubation with a molecule that binds to either area.

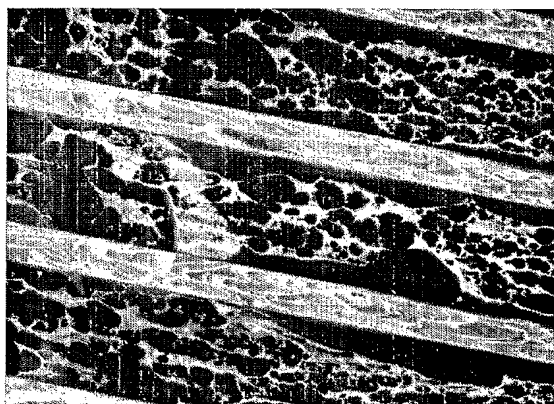
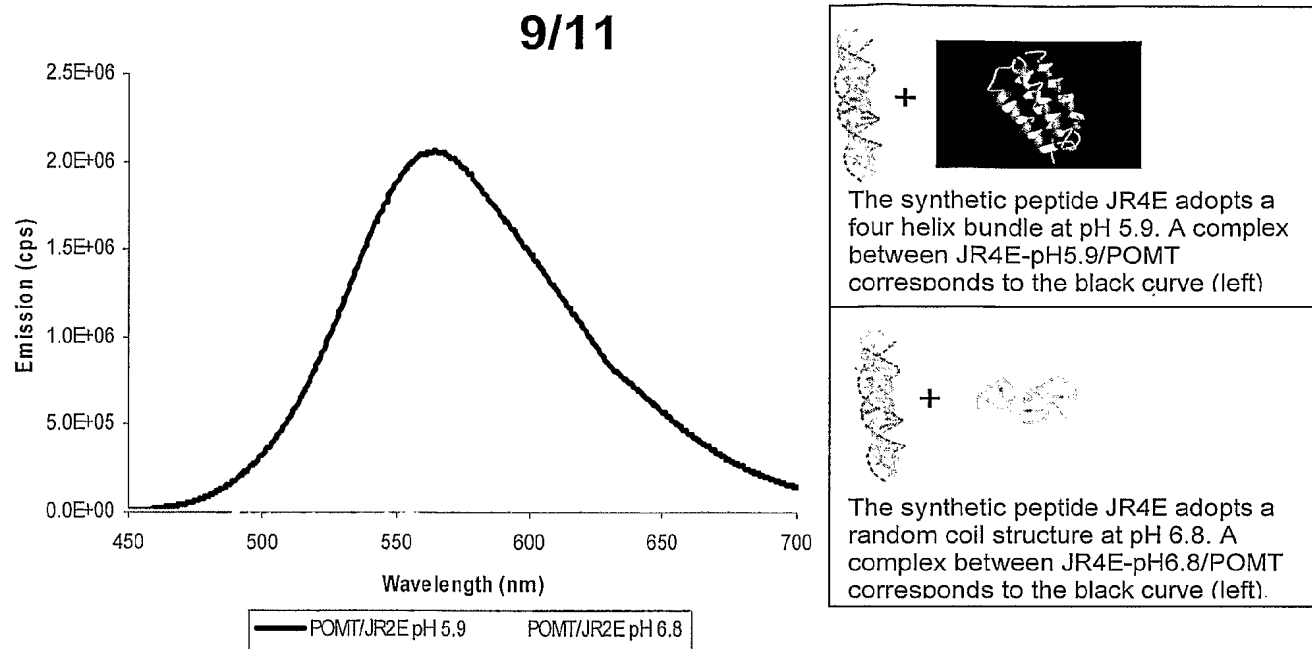
**Modified area:**

ssDNA in phosphate buffer binds to the modified area

Unmodified area:

ssDNA in phosphate buffer does not bind to the this area

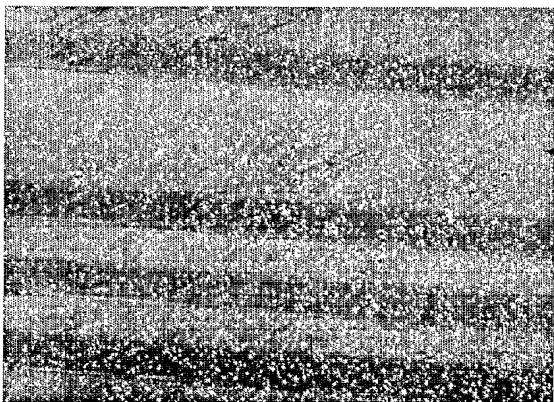
Fig. 9

**Hydrophobic area:**

POMT/JR4E-pH5.9 complex in phosphate buffer solution does not stain this area

Hydrophilic area:

POMT/JR4E-pH5.9 complex in phosphate buffer solution stains this area in green color

**Hydrophobic area:**

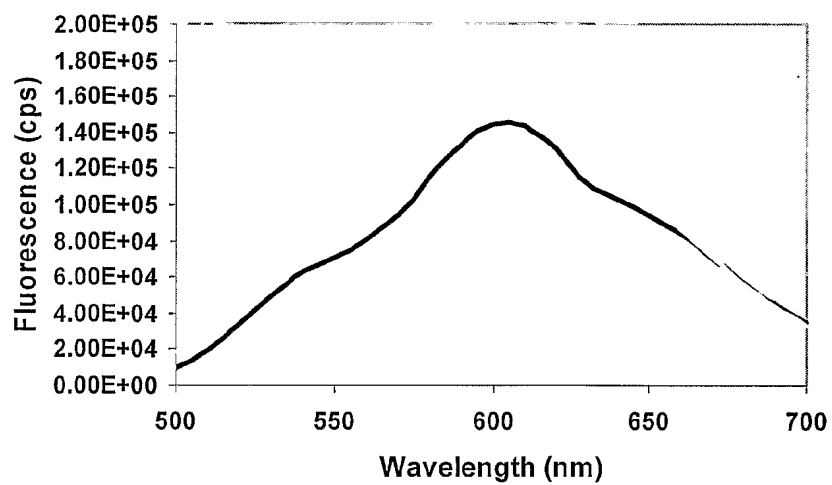
POMT/JR4E-pH6.8 complex in phosphate buffer solution stains this area in orange color

Hydrophilic area:

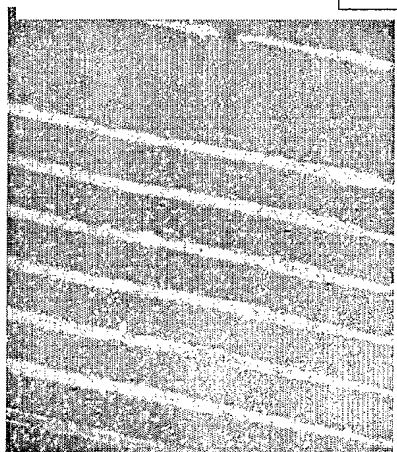
POMT/JR4E-pH6.8 complex in phosphate buffer solution does not stain this area

Fig. 10

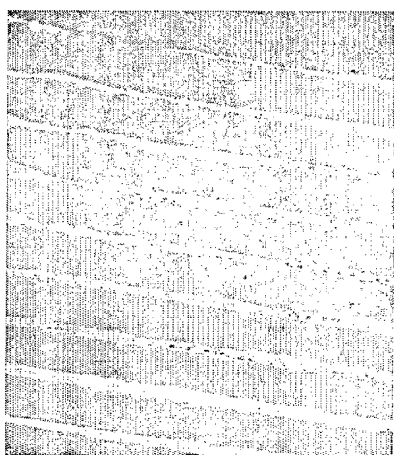
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— POWT/CaM POWT/CaM + Ca²⁺



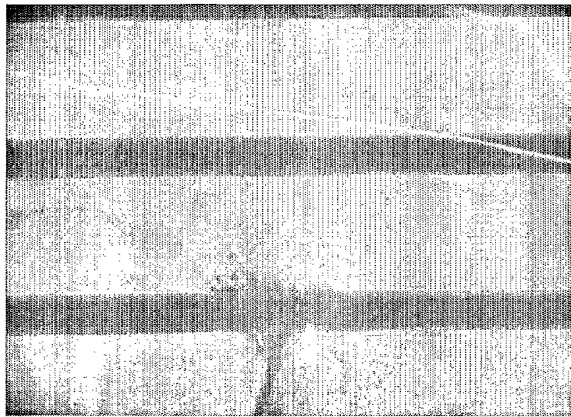
Hydrophobic area:
POWT/CaM complex in phosphate
buffer solution stains this area in
orange color



Hydrophobic area:
POWT/CaM complex with Ca²⁺ added
in phosphate buffer solution stains this
area in green color

Fig. 11

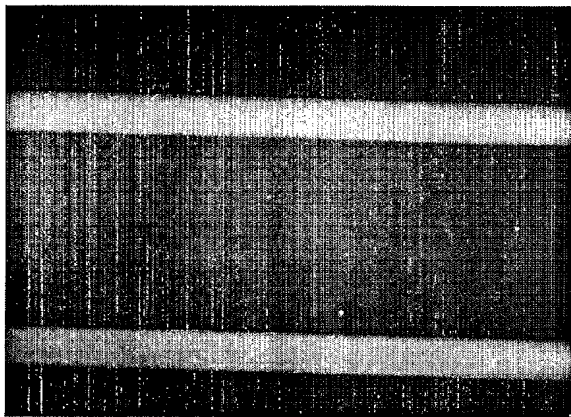
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**Hydrophilic area:**

PTAA/Insulin complex in phosphate buffer solution does not stain this area.

Hydrophobic area:

PTAA/Insulin complex in phosphate buffer solution stains this area.

**Hydrophilic area:**

POMT/Insulin complex in phosphate buffer solution stains this area.

Hydrophobic area:

POMT/Insulin complex in phosphate buffer solution does not stain this area.

Fig. 12